The Theory of Attention and the Economy of Understanding as a New Price Model in the Information Economy?

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Abstract
Most prices in the information economy (scientific information) are based on length of information, duration of online time, actuality etc., but most of these price concepts give little satisfaction to the customer because they are irrational and not comprehensible. Till today there exist no price concepts in the information economy concidering the attention or understanding of information. Therefore the theory of Georg Franck (1999, 2002) will be an interesting attempt for new price models.

People nowadays stay in confrontation with a maximum number of information per day and recognise only the most attractive and readily comprehensible information. Advertising agencies are measuring the attention drawn by a particular medium like television. The private TV as a leading mass medium finances itself by selling the service of catching attention. These are systems of channels supplying information in order to gather attention in return and determine the financial success.

It should be the goal of every author (scientist) to gather attention by the scientific community. Every scientist and author should formulate his publication attractive to receive a maximum of attention and understanding because these two points will be rewarded directly with scientific success (Science Citation Index). But how much would the consumer (scientist) pay for understanding and attention? Till today no host or supplier of information uses this model. But for example Google uses the theory of attention in its ranking (frequency of linking) and word advertising (most-searched words) indirectly and this possibly would be a step to new price concepts.

Introduction

Pricing structures in generally have to be customised to fit the needs of the market, to increase cost recovery and to enlarge the focus on the target group. Service providers generally can base their pricing on tangible values. For instance an attorney takes the amount in dispute other service provider have fix scales of charges. Comparable models of pricing do not exist for information services and they can't exist.

Information pricing is a far more complex matter. The same information can have a completely different value for different customers and the information provider will normally not be able to judge this value depending on the customer. The value is critically influenced by the time the information is created, delivered and can be used. All these examples show

how a subjective matter pricing is and this is the reason why the provider and the customer find it hard to develop a feeling and basis for an acceptable price (Georgy, 2002).

On the contrary to material goods the price of information cannot be determined by the cost of its production per unit but rather its primary creation. This is based on the fact that information can be reproduced very simply by copy, which only produces costs e.g. in terms of paper and copyright fees (Georgy, 2002).
Till today in the information economy exists no price model of general validity. Therefore price concepts considering the attention or understanding of information should be an interesting and fresh attempt in the information economy.

Price Models in the Information Economy

Price Differentiation

Price differentiation describes the facts that goods can be sold at different prices not primarily depending on higher or lower costs to produce them (Helmedag, 2001). A requirement for price differentiation is the possibility of customer segmentation. The following forms are common:

- geographical price differentiation,
- personal price differentiation,
- temporal price differentiation,
- quantitative price differentiation,
- qualitative price differentiation.

All these models are customary in the information economy. Most prices are based on length of information (quantitative price differentiation), duration of online time (quantitative price differentiation), actuality (temporal price differentiation) etc., but most of these price concepts give little satisfaction to the customer because they are irrational and not comprehensible.

Semi public and public providers often favour a personal or qualitative price differentiation. The host FIZ Karlsruhe is a good example for this. Here a qualitative price differentiation was used for short-, standard and special retrieval requests while a personal price differentiation was applied for students, college students and civilian and military service personnel (Benkowsky et al., 2005).

Private providers often favoured a temporal or quantitative price differentiation. This comes as no surprise since private information brokers often focus on companies and less on a single customer (person).

Time-based criteria are of a far higher importance for private providers, since they are more dependant on economic factors in terms of making use of their resources. In these cases, services usually are not subsidised.

For example, most private providers determine individual prices depending on the source of information (company, market or database research) and the providing countries. The result is a very complicated and often incomprehensible price list. Others differentiate by the kind of research: online, internet or offline research and an amount-based pricelist depending on the kind (Benkowsky et al., 2005).

Price bundling
Price bundling is a different method to fix a price. With this concept products are either offered alone or in bundles, each with a fixed price. In most cases the bundle price will be lower than the sum of all single product prices added up (Brandtweiner, 2001). Most of the cellular network provider favour these form of price model. The result of price bundling often is the purchase of many unnecessary and needless services.

Attention
"Attention is focused mental engagement on a particular item of information. Items come into our awareness, we attend to a particular item, and then we decide whether to act" (Davenport, Beck, 2001). To give attention it's necessary to screen out a lot of external impulses, and then the attention must be linked with a decision-making process. Without decision and action there exists no real linking with the attention process.

The scientific economy of attention
The attention is the thought economy of the scientists. The motive earning attention overrides normally that of earning money (Franck, 2002). The money will be earned by the publishers and many authors must pay for the attention marketing of the publishers. Therefore the attention of scientists often correlates with the scientific reputation of the scientific journal – journal impact factor, e.g. Science or Nature. The Science Citation Index - SCI® was first mentioned and pronounced in the journal Science in 1955 as an tool to facilitate the dissemination and retrieval of the scientific literature. The tool has two purposes:

- to identify the publications of the scientists and
- to identify how often the papers of the scientists are cited (Garfield, 1955).

Today, the webometrical analysis is increasingly brought into play. Webometrics is "the study of the quantitative aspects of the construction and use of information resources, structures and technologies on the Web drawing on bibliometric and informetric approaches" (Björneborn, Ingwersen, 2004). Since 2004 the Webometrics ranking of world universities is offering information about more than 3000 universities ranked according to indicators measuring web presence and impact. One of the important parameter ist the Web Impact Factor - WIF defined as the number of total link pages, divided by the number of web pages published in the site that are accessible to the crawler (Ingwersen, 1998). A good Web Impact Factor requires a lot of attention on the web page. It's part of the universitity's marketing to achieve an advanced ranking, to achive a maximum of attention.

People nowadays stay in confrontation with a maximum number of information per day and recognise only the most attractive and readily comprehensible information. Therefore it should be the goal of every author (scientist) to gather attention by the scientific community. Every scientist and author should formulate his publications attractive to receive a maximum of attention and understanding Therefore the pursuit of attention and understanding could possibly lead to efficiency in scientific publications if database supplier and producer use this tool of pricing information.

The private economy of attention
As mentioned people nowadays stay in confrontation with a maximum number of information per day and recognise only the most attractive and readily comprehensible information. Advertising agencies are measuring the attention drawn by a particular medium like television. The private TV as a leading mass medium finances itself by selling the service of catching attention. These are systems of channels supplying information in order to gather

attention in return and determine the financial success. In these cases the attention becomes a new currency which depends on the prominence of something (trademarks, brands) or somebody (star, VIP). The combination of famous well-known brands and prominents e.g. in TV-spots are the guarantee for financial success by attention.

Attention as a Currency

What's the difference between money and attention as a currency? The attention cannot be saved and / or (re)invested as would be possible with money and it's not possible to put attention on the market or to trade at the stock exchange. But there is another big difference between money and attention. Normally it's irrelevant from whom we receive money but it's not irrelevant from whom or what the attention comes from. And, attention as a currency can have a positive, zero or negative value (Franck, 1999). Only in combination with a positive charisma or pleasant memories to something or somebody the attention normally will be positive, otherwise the value is zero or negative. In conclusion, attention is not an independent currency, but there is the opportunity turning the attention into hard cash. Therefore attention could be called an indirect currency.

Attention as a Price Differentiation Model?

As mentioned price differentiation describes the facts that goods can be sold at different prices not primarily depending on higher or lower costs to produce them but depending on the maximum willingness to pay. Therefore attention and understanding can be described as an alternative price differentiation model, but the quotations of the expected prices of attention are not only influenced by a person's current attention, they also comprise expected future attention. Therefore not quality but attraction must be produced.

On the other hand science basically means investing attention in oneself and directing attention of those who follow them (understanding). It seems to be important to maintain the attention to other scientists (scientific community). Therefore attention as a price differentiation model seems to be doubtful for scientific publications. Possibly this is the cause hosts and supplier of scientific information don't use this pricing model.

If using attention as a price concept a totally different price structure must be implemented. But, how to measure the attention of an individual scientific article? Exists there any correlation between attention and understanding or quality? Will scientific publications then become a private economic sector? Who is the winner of this price concept: scientists, publisher, provider? Many questions left.

But for example Google uses the theory of attention in its ranking (frequency of linking) and word advertising (most-searched words) indirectly and it would be possibly a first step to new price concepts because about the adwords it's possible to attract attention to a scientific service, e.g. a connection between a provider like Google and a host like FIZ Karlsruhe or Dialog.

Conclusions

The discussion shows, that new models of pricing should be interesting for the information economy and that advertising as another kind of information use attention and understanding as the base of pricing for a long time. But could the pursuit of attention and understanding lead to efficiency in scientific publication if database supplier and producer use this tool of pricing information? People begin to withdraw from the stress of attention more and more and information providers must begin to focus on quality like the professional hosts. Then

attention will perhaps lose its function as a currency. Nonetheless the discussion about the attention and understanding as an alternative price model should be continued according to the attractiveness of scientific publications and with a view to the own attention.

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